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## CARDIAC FUNCTION AND HEART FAILURE

# LEFT ATRIAL VOLUME AS A PREDICTOR OF REVERSIBLE MYOCARDIAL DYSFUNCTION IN PATIENTS WITH DILATED CARDIOMYOPATHY WHO HAVE NO DELAYED ENHANCEMENT ON MAGNETIC RESONANCE IMAGING

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**Background:** Spontaneous improvement of left ventricular (LV) systolic dysfunction can occur in dilated cardiomyopathy (DCM), especially if patients have no delayed enhancement (DE) in cardiac magnetic resonance imaging (CMR). However, even in the absence of DE, not all patients have functional recovery. The aim of this study was to investigate the predictors of functional recovery in patients with DCM who had no DE on CMR.

**Methods:** One hundred eighteen patients with DCM underwent CMR. Among them, 43 patients (28 male, age: 55.8±14.3years) showed no DE and these patients comprised study population. The study patients were divided into 2 groups according to the occurrence of functional recovery defined as an increase of ejection fraction (EF) to a level of ≥50% and net increase in EF of 20% or more.

**Results:** In patients who showed functional recovery (n=14), left atrial volume index (LAVI)(26.1±7.8 ml/m2 vs. 45.3±17.7 ml/m2) and LV end diastolic dimension (62.2±6.0 mm vs. 66.6±6.6 mm) were significantly smaller when compared with those without functional recovery ($p<0.05$). In logistic regression analysis, LAVI was the only significant parameter associated with functional recovery (OR: 0.858 [confidence interval: 0.766-0.961], $p<0.05$). Among patients with LAVI<38 ml/m2, 56% of patients showed functional recovery whereas none of the patients with LAVI > 38 ml/m2 recovered.

**Conclusions:** In patients with DCM who had no DE in CMR, LAVI is an independent predictor of LV functional recovery with high specificity.